

Isotonic Crystalloid Fluids

Indications: Hypovolemia, Sepsis, Dehydration, Establishing vascular access and medication administration

Contraindications: Fluid overload resulting in pulmonary edema and/or congestive heart failure

ADULT DOSING

Indication	Dose	Rate & Route	Note
Hypovolemia Sepsis Dehydration Establishing vascular access and medication administration	< 4,000 mL	IV/IO	May titrate dose and administration rate based on assessment, MAP > 65 or permissive hypotension when indicated, and most appropriate clinical operating guideline

ADULT DOSING

PEDIATRIC DOSING

Indication	Dose	Rate & Route	Note
Hypovolemia Sepsis Dehydration Establishing vascular access and medication administration	Pediatric: 20 ml/kg Newborn: 10 ml/kg	IV/IO	May titrate dose and administration rate based on assessment, mental status and vital signs, and most appropriate clinical operating guideline

PEDIATRIC DOSING

Precautions / Side Effects

Crystalloid fluids are administered for volume expansion as indicated. Crystalloid fluids, such as Lactated Ringers or Normal Saline, do not add oxygen binding capacity. Rapid volume resuscitation of crystalloid fluids, preferably through large-bore line, may be indicated in the acute setting. Always monitor for signs of fluid overload and titrate to a desired effect. Maintenance infusion is indicated as needed to maintain patent access or minimum volume to maintain volume homeostasis.

Interactions

None

Class

Isotonic to human plasma

Mechanism of Action

Approximate concentrations of various solutes and do not exert as osmotic effect, expand intravascular volume without disturbing ion concentration or significant fluid shift.

Onset of Action

Immediate

Peak Effect

Varies

Duration of Action

Varies